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## NOTICE OF ALLOWANCE AND FEE(S) DUE

93758 7590 12/10/2010

Ogilvy Renault LLP (Zimmer Cas)  
1 Place Ville Marie  
Suite 2500  
Montreal, QC H3B 1R1  
CANADA

EXAMINER

LARYEA, LAWRENCE N

ART UNIT

PAPER NUMBER

3768

DATE MAILED: 12/10/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,192	12/08/2005	Herbert Andre Jansen	05015228-99US PTN/DF	9625

TITLE OF INVENTION: METHOD FOR PROVIDING PELVIC ORIENTATION INFORMATION IN COMPUTER- ASSISTED SURGERY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	03/10/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to:** Mail **Mail Stop ISSUE FEE**  
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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated excepted below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

93758 7590 12/10/2010  
 Ogilvy Renault LLP (Zimmer Cas)  
 1 Place Ville Marie  
 Suite 2500  
 Montreal, QC H3B 1R1  
 CANADA

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,192	12/08/2005	Herbert Andre Jansen	05015228-99US PTN/DF	9625

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nonprovisional	NO	\$1510	\$300	\$0	\$1810	03/10/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
LARYEA, LAWRENCE, N	3768	600-300000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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93758	7590	12/10/2010	EXAMINER	
LARYEA, LAWRENCE N				
Ogilvy Renault LLP (Zimmer Cas) 1 Place Ville Marie Suite 2500 Montreal, QC H3B 1R1 CANADA			ART UNIT	PAPER NUMBER
			3768	
DATE MAILED: 12/10/2010				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1250 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1250 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

# Notice of Allowability

## Application No.

10/530,192

## Examiner

LAWRENCE N. LARYEA

## Applicant(s)

JANSEN ET AL.

## Art Unit

3768

### - The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 07/22/2010.
2. ☒ The allowed claim(s) is/are 1-5, 7 and 9-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

### THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

### **DETAILED ACTION**

#### **1. Summary Of Enhanced First Action Interview Pilot Program.**

During the interview held on 11/02/2010 , applicant gave a brief description of the invention and compared it with cited prior art references. Applicant argued that the cited prior arts do not teach that a plane associated with a given posture of the patient is obtained, and the frame of reference of the pelvis or the pelvic orientation are corrected as a function of the plan during a Hip Plant Surgery . Further, applicant explained that frame of frame is a table that the patient lies on it during the surgical procedures.

Examiner indicated that such an amendment appeared to overcome the rejections of records, and that an updated search and reconsideration would be given upon filing of a next formal response.

### **EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Pierre T.A. Nguyen on 11/02/2010.

The Application has been amended as follow:

In the specification, on page1, line 4, after the phrase "This application", the phrase --is a National Stage application of International patent application No. PCT/CA03/01542, filed on October 6, 2003, which-- was inserted.

In the specification, on p1, line 8, the phrase "reference. This application also claims priority of" has been changed to --reference, and--.

The claim 1 has been amended as follows:

At claim 1,line 4, "adapted" was replaced with --configured--.

At claim 1,lines 19, "with" was replaced with --based on--.

The Claim 15 has been amended as follows:

15. A method for associating a frame of reference of a pelvis to a given posture of a patient in computer-assisted surgery, comprising:

creating a frame of reference of a pelvis with respect to a trackable reference;  
positioning the patient in a given posture with respect to a plane of reference; [and]  
digitizing the plane of reference with respect to the trackable reference such that orientation information associating the frame of reference to the given posture is calculable as a function of the orientation of the plane of reference; and  
obtaining a display of information comprising the frame of reference corrected based on said orientation information.

3. The following is an examiner's statement of reasons for allowance:

**H. E. Sanders (US Patent 2,703,080. Mar. 1,1995)** teach a Table with a Posture Correction Apparatus to make it possible to apply corrections while a subject. Is in a quiescent state.

**Schellenberg (US Patent 7,302,288. Nov. 27,2007)** teach a medical positioning system which comprises a tool position tracker for tracking a position and orientation of the hand-held tool and the direction indicator with respect to a reference frame ; the direction indicator being configured to produce a visual indication of a direction in which a hand-held portion of the tool should be moved to reach a desired position based at least in part on the position and orientation of the tool as determined by the tool position tracker, the indicated direction being relative to a reference frame of the hand-held surgical tool which surgical tool frame of reference frame of reference changes relative to a frame of reference of the patient as the surgical tool moves relative to the patient; and a display remote from the tool and the direction indicator which displays a diagnostic anatomical image of the patient with a representation of the tool in its current position and orientation superimposed thereon.

**Kienzle,III (US Pub. 2002/0077540 Jun.20, 2002)** teach a computer assisted surgery system with enhanced graphic capabilities for insertion of guide pins into a body part, the system comprising: an x-ray imaging device for generating at least one 2-D image of a body part; means for displaying the at least one 2-D image of the body part; a surgical instrument with a physical feature defining a real trajectory; a localizing device for measuring the pose of the surgical instrument; means for

generating a graphic representation of the real trajectory; means for determining the location of one or more virtual trajectories relative to the real trajectory; and means for superimposing graphic representations of the real and virtual trajectories over the at least one 2-D image of the body part; wherein the virtual trajectories may be used for assisting the surgeon in aligning the drill guide relative to the body part or guide pins and said virtual trajectories need not represent a real feature of the surgical instrument.

**Carson (US Pub. Dec. 26, 2002/0198451. Dec.26,2002 )** teach a process for performing high tibial osteotomy surgical operations on portions of a tibia, comprising: (a) obtaining at least one image of a body part forming a portion of a knee joint with an imager, wherein the body part and the imager are each attached to a fiducial capable of being tracked by at least one position sensor; (b) registering a surgical instrument adapted to assist the surgeon in shaping bone during high tibial osteotomy, which instrument is attached to a fiducial capable of being tracked by at least one position sensor; (c) using a computer which receives signals from the at least one sensor, tracking position and orientation of the surgical instrument relative to the body part; (d) generating and displaying on a monitor associated with the computer a visual image of the instrument properly positioned and oriented relative to the body part; (e) navigating the surgical instrument relative to the body part and attaching the surgical instrument to the body part according to the image; and (f) modifying the body part using the surgical instrument attached to the body part; and (g) assessing performance of the knee joint using images displayed on said monitor.



**Cosman (US Patent 6,405,072 Jun.11,2002)** teach medical process for determining a location of an anatomical target with reference to a medical apparatus, comprising the steps of: scanning a patient's anatomy, including an anatomical target to obtain image scan data thereof referenced in image scanner coordinates; indexing a position of the patient's anatomy and a position of a medical apparatus with a camera system to obtain camera data thereof referenced in camera coordinates; correlating the image scan data and the camera data by identifying at least one marker having a known location with respect to the image scan data and the camera data; and transforming the image scanner coordinates to the camera data coordinates such that the position of the anatomical target is determined with respect to a reference point of the medical apparatus.

**Sarin et al (US Pub. 20030153829. Aug. 14, 2003.)** teach a computer assisted, non-radiological method of intra-operatively measuring and assessing relative geometric relationships among skeletal features of a hip joint, suitable for surgical navigation of a hip arthroplasty operation, comprising the steps of: defining a pelvic plane from at least three recognizable anatomic features of the pelvis; tracking with a locating system the orientation of an acetabular implant, to obtain acetabular implant orientation data; and adjusting said acetabular implant into a desired orientation with respect to said defined pelvic plane, without reference to previously obtained radiological data, by relating said acetabular implant orientation data to said defined pelvic plane.

**Tuma et al (US Pub.20040117026 . Jun. 17,2004)** teach a method for determining an aperture angle of a joint, said method comprising: detecting at least one of positions of components forming the joint and positions of structures connected to or to be connected to the joint; and ascertaining the aperture angle of the joint from the detected positions.

No prior art of records teaches or suggests a system which includes a computer-assisted surgery system for guiding an operator in altering a pelvis for a subsequent insertion of a pelvic implant, which comprises a source of posture data being a tool digitizing a plane related to a given posture of the patient; a posture data correction calculator operative to provide a display of information comprising the frame of reference corrected based on said posture data from the source of posture data when altering the pelvis; and displaying said display of information and the orientation of the bone altering tool with respect to the pelvic frame of reference in combination with the other claimed elements and method steps.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAWRENCE N. LARYEA whose telephone number is (571)272-9060. The examiner can normally be reached on 9:30 a.m.-5:30 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LNL

/Unsu Jung/  
Primary Examiner, Art Unit 1641